

AQUACULTURE

PROGRAM PROFILE

Goal	To assist the aquaculture industry in controlling pests and diseases of economic importance, to facilitate the movement of aquatic animals and products in interstate and international commerce, and to improve the health and production characteristics of aquatic species.
Enabling Legislation	Animal Damage Control Act of March 2, 1931, (7 USC 426-426b, and 426c as amended); Animal Marketing Act of 1946; Federal Noxious Weed Act of 1974 (7 USC 2801; PL 93-269); Virus-Serum-Toxin Act of March 14, 1913 (21 USC 151-158) and Food Security Act amended December 23, 1985; and the Animal Industry Act of 1884.
Economic Significance	Aquaculture is the fastest growing sector of the animal production industry worldwide. Between 1983 and 1994, the market growth rate for US aquaculture production increased by 120 percent with an estimated worth of approximately \$800 million. US aquaculture accounts for more than 180,000 jobs and has an economic impact of more than \$5.5 billion.
Principal Approach and Methods Used to Achieve Goals	APHIS currently supports the industry through research on and operations to control depredating birds and other wildlife; noxious aquatic weed control and exclusion; and regulation of veterinary biological products used to prevent, diagnose, and treat diseases affecting aquatic animal health. APHIS provides technical assistance and direct control to aquaculture producers experiencing depredation problems with wildlife. This includes providing technical information, loaning equipment, making on-site visits to assess wildlife damage, and recommending the issuance of migratory bird depredation permits. In addition, APHIS issues export health certifications for live fish and fish eggs exported to other countries and provides laboratory assistance to the aquaculture industry for special problem cases. APHIS also assists the States in establishing certification programs for the exportation of aquaculture products; negotiates aquatic health export protocols with foreign countries to facilitate exports of US aquatic species;

and implements importation requirements to protect against introductions of serious pathogenic agents.

History

APHIS has provided assistance upon request to aquaculture producers over the last 30 years. The level of such assistance has increased significantly during the past 15 years as aquaculture continues to gain popularity and grow at a rapid pace. Much of this growth has occurred in the southeastern United States. APHIS began providing assistance to exporters of live fish and fish eggs in 1993. In December 1993, APHIS was able to facilitate the first shipment of seafood into the European Union. In May 1994, APHIS established the first voluntary certification program in the States of Washington and Alaska.

State and Local Cooperation

States cooperate, along with aquaculture industry members and organizations. Some State game and fish agencies also issue migratory depredation permits.

Involvement of Other Agencies

Fish and Wildlife Service provides migratory bird depredation permits based on APHIS recommendation.

RESOURCE DATA

-----Obligations-----

	<u>Direct</u>	<u>Reimbursement</u>	<u>User Fees</u>	<u>Staff-Years</u>
FY 1996	482,680	--	--	5
FY 1997	565,905	--	--	7
FY 1998	562,738	--	--	5
FY 1999	560,713	185,141	--	6
FY 2000 (est.)	766,000	200,000	--	7
FY 2001 (est.)	576,000	215,000	--	5

	<u>APHIS</u>	<u>Coop</u>	<u>Total</u>	<u>CCC</u>	Contingency <u>Fund</u>
Cum.	\$3,776,860	\$915,925	\$4,692,785	--	--

RECENT ACCOMPLISHMENTS

Aquaculture Producer Assistance

APHIS is continuing efforts to reduce damage caused by fish-eating birds to the aquaculture industry in the fish-producing States. The program supports five wildlife biologists stationed in Ruskin, Florida; Greensboro, Alabama; Lonoke and Lake Village, Arkansas; and Stoneville, Mississippi. These biologists provide assistance and equipment to aquaculture producers, including catfish farmers in Alabama, Arkansas, Mississippi, and Florida; tropical fish farmers in Florida; and bait fish farmers in Arkansas in order to reduce bird damage to their aquaculture resources. APHIS continues to provide assistance to catfish and crawfish farmers in Louisiana, and trout farms in Pennsylvania. In addition, APHIS continues to cooperate with the US Fish and Wildlife Service in the development and implementation of a management plan to control damage caused by fish-eating birds to aquaculture resources in the mid-south.

APHIS has expanded migratory bird damage management in Arkansas with emphasis on fish eating bird damage to aquaculture and fishery resources under a new \$130,000 funding package approved by the Arkansas Game and Fish Commission in June 1998.

The 1997-98 winter cormorant roost dispersal program coordinated by APHIS in Mississippi, was a tremendous success. Cormorant numbers in the Delta catfish production region were reduced by 83 percent even though the population has doubled over the last 3 years. Personnel from 72 aquaculture facilities and organizations participated.

Voluntary Certification Programs

APHIS received two protocols in FY 1999, one from the State of Texas and the other from Florida, requesting voluntary certification and inspection programs. Both requests are pending. To date, 7 voluntary certification and inspection programs have been established in Washington (1994), Alaska (1994), and California (1996), Maryland (1997), Pennsylvania (1997), Arkansas (1997), and Idaho (1999).

Aquaculture Laboratories

In FY 1998, APHIS published procedures for designing laboratories as qualified to conduct diagnostic testing of aquatic animals, embryos, ova, and semen intended for export and drafted a strategic plan for implementing a National Aquaculture Program.

Export Health Certificates

Since FY 1994, APHIS endorsed export health certificates for a total of 300 million fish eggs from Chile, Columbia, Greece, Korea, and Japan. Fish species currently being certified include rainbow trout, Donaldson steelhead trout, Atlantic salmon, and coho salmon. APHIS also endorsed over 3.8 million live (ornamental) fish that were shipped into 47 different countries.

Regional Aquaculture Training

During FY 1999, APHIS conducted a National aquaculture diagnostic disease training course which addressed specific diseases in species of concern in the immunology and histology, virology, bacteriology, and parasitology disciplines. APHIS also published an Advanced Notice of Proposed Rulemaking in the Federal Register, which designates farm-raised fin fish as livestock and moves toward implementing a National Aquaculture Program.

Research

In June 1999, program officials collected 117 birds at a double-crested cormorant rookery on Millwood Lake, Ashdown, Arkansas, for food habits, DNA, and morphological studies. The program found about 125 active nests. This was the first significant cormorant rookery in Arkansas since 1930. These studies were the result of cooperation among Arkansas WS, National Wildlife Research Center, Concerned Citizens for Cormorant Control, Arkansas Game and Fish Commission, U. S. Army Corps of Engineers, Stuttgart National Aquaculture Research Center, and the University of Louisiana at Lafayette.